

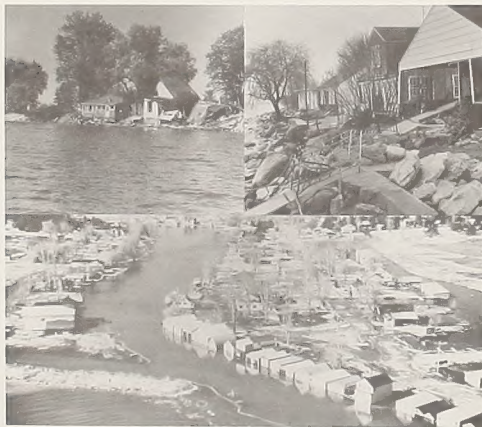
Public involvement

Whether we realize it or not, each of us is affected by improper development and use of the Great Lakes shores. If we own property fronting on one of these major water bodies we stand to gain from proper management the full return we hoped for when making the original investment. Conversely, inadequate management will, sooner or later, cost us property damage and/or losses for which we were not prepared.

As inshore dwellers, we lose when tax revenue must be spent in public compensation for storm and erosion damages resulting from improper

development. We gain when as visitors to public beaches and parks we can enjoy the benefits of wise planning of them.

Good management depends not only upon the availability of reliable information about the Great Lakes shores but equally importantly, upon the use that is made of that knowledge. Thus, there is a clear responsibility upon all of us to devote enough time and effort to become aware of the nature, of human pressures and of the economics involved. Subsequently, we can then help disseminate understanding among neighbours, friends and others to ensure more enjoyment and less distress from this valuable environmental heritage.



Information resources

Canada-Ontario Great Lakes Shore Damage Survey

The 97-page official report of the flood and erosion damage suffered by property owners along the shores of southern Lake Huron, Lake St. Clair, Lake Erie and Lake Ontario in the winter of 1972-73. Available free of charge from:

Public Information Unit
Canada Centre for Inland Waters
P.O. Box 5050
BURLINGTON, Ontario
L7R 4A6

Information Services
Ontario Ministry of Natural Resources
Whitney Block, Queen's Park
TORONTO, Ontario
M7A 1W3

Great Lakes Coastal Zone Atlas

A 637-page collection of large scale maps illustrating the findings of the above-mentioned report. Available for public reference at public libraries or at the nearest field office of the Ontario Ministry of Natural Resources.

All You Wanted to Know About Great Lakes Levels

This illustrated booklet explains in layman's terms how Great Lakes levels rise and fall, what controls are possible and the physical features of the system. Free of charge, it can be obtained from:

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Not Man's to Command

A short film explaining the facts behind fluctuating Great Lakes levels. An accompanying folder sets out some of the popular misconceptions along with the facts.

Available on free loan from public libraries via the National Film Board.

Shore Property Hazards.

Those intending to buy shore property, owners planning to build and those thinking of protection for existing structures are all addressed in this practical guide to essential considerations. Including references to other worthwhile reading, this free brochure is available from:

Public Information Unit
Canada Centre for Inland Waters
P.O. Box 5050
BURLINGTON, Ontario
L7R 4A6

Information Services
Ministry of Natural Resources
Whitney Block, Queen's Park
TORONTO, Ontario
M7A 1W3

Canada-Ontario Maps of Great Lakes Flood and Erosion-Prone Areas

Available at \$2.75 each from:

Ministry of Natural Resources
Public Service Centre
Whitney Block
99 Wellesley St. West
TORONTO, Ontario
M7A 1W3

This folder was a joint production of the Government of Canada and the Government of Ontario.



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and Environment
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Ontario

Ministry of
Natural
Resources

Hon. Frank S. Miller
Minister
Dr. J. K. Reynolds
Deputy Minister

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COPING WITH THE GREAT LAKES

DEPOSITORY LIBRARY MATERIAL

A CANADA-ONTARIO PROGRAMME

Fifty-eight per cent of Ontarians live in municipalities on the shores of the Great Lakes.

Counties bordering those shores contain 87% of the province's entire population.

In 1972-73, the lower Great Lakes shores sustained storm damage losses of \$28,000,000.

These facts together help explain the concern on the part of both the Government of Canada and the Government of Ontario for better management of those shores. They also underscore the importance of the Canada-Ontario Great Lakes Shore Damage Survey of 1973 and they are the reason for a continuing program of governmental activities stemming from that survey.

This is the second in a series of folders designed to inform the public of the latest progress in those various activities. Companion publications, dealing with specific aspects of shore management, will also appear from time to time. A list of those now available is to be found on the last panel of this folder.

The continuing threat

The Canada-Ontario Great Lakes Shore Damage Survey, published in 1975, made clear that the storms of 1972-73 were not once-in-a-lifetime freaks of nature. Flooding and erosion are continuing problems in the lower lakes, compounded by man's mismanagement of shore lands. If nothing were done, similar high water levels and storms could lead to damages worth many more millions because of high erosion rates, flood susceptibility and structures built too close to the shore.

One of the conclusions of the report was the inevitability of recurrence. "Overall strategy demands the assumption that these conditions will recur and all shoreline management and planning studies should be based on this premise."

That federal-provincial report therefore compiled details of areas where the risk was highest and made recommendations as to how damage might be minimized.

Copies of the report were distributed to municipal planners, engineering consultants, conservation authorities and others. A limited number are still available from either of the addresses mentioned on the last panel of this folder.

At the same time, to graphically describe the findings of the report, a Coastal Zone

Atlas was published. At a scale of 200 metres to the centimetre, its 637 pages show the erosion rates, bluff recession over an 18-year period, land values and other facts about the shores of southern Lake Huron, Lake St. Clair, Lake Erie and Lake Ontario.

A coastal zone planning aid

To build on this foundation, the report recommended that several additional things be done. Among them was development of maps to serve as coastal planning aids. Where the Coastal Zone Atlas recorded past erosion and flood damage in 1972 and 1973, new maps were now needed to show where future erosion and flooding could occur.

In the autumn of 1976, work began on mapping the entire shoreline from Ausable Beach on Lake Huron to Gananoque on the St. Lawrence River. Drawn to a scale of 100 metres to the centimetre, these maps will have three coastal lines. These will show where flooding could occur, the extent to which the shore will erode over the next 100 years and highly dynamic (potentially mobile) beach areas.

Early in 1978, these maps, covering 10 to 20 kilometres of shore, will be available at \$2.75 per copy from the Government of Ontario at the address listed on the last panel of this folder.

Monitoring shore changes

To better understand the entire problem of erosion and keep municipal planners up to date on annual changes in the shore, a program of monitoring began in 1972. This survey concentrates on 162 specific coastal locations and will measure storm-caused changes as well as those occurring more slowly with the passage of time.

Thus, we will also be able to update the erosion forecasts contained in the coastal planning maps mentioned earlier.

Periodic summations of these findings, together with technical interpretations can be obtained from the Shore Properties Studies Section at the Canada Centre for Inland Waters.

A shore management study

There are many ideas for managing the shore so as to mitigate the problems of flooding and erosion. But how would they work in practice? What new problems, initially unseen, would later become apparent as a result of this or that remedial effort? To provide the answers to these questions, different management techniques might be evaluated with respect to a specific piece of flood-prone or erodible shore. Such was another of the recommendations of the original Shore Damage Survey. This too has been acted upon.

In 1977, work began on an 18-month intensive study of a 30-kilometre section of Lake Erie shoreline near Kingsville. The

chief objective is to develop a rational method for judging the cost and worth of various management alternatives applied to a specific problem area. From this work will come two reports: detailed accounts of the Kingsville problem and its solution, and methods for dealing with erodible and flood-prone shores in general.

Public awareness

Of key importance to the success of the entire program is the matter of public awareness. Only when the public, including not only shore dwellers but also those who live inland, recognizes the inevitability of continuing erosion and flooding will

better planning and management become a reality.

Thus, publications such as this are periodically updated and widely distributed. In addition, through the field offices of the Ontario Ministry of Natural Resources

as well as through several public libraries, copies of the Coastal Zone Atlas and the Shore Damage Survey Report are made available for public perusal.

In cooperation with various Conservation Authorities, the governments of Canada and Ontario are seeking ways in which to jointly provide public information so as to achieve maximum success at minimum cost to the taxpayer.

Through the medium of television, the film "Not Man's to Command", which graphically depicts the difficulties of controlling Great Lakes levels, has been seen by hundreds of thousands of Ontarians. This film is also available on free loan for private or group screenings, through public libraries and the National Film Board.

In addition, for the benefit of planners, engineers and other specialists involved in shoreline management, several workshops have been held to facilitate detailed discussion of the studies and reports completed to date. Others will be arranged from time to time.

